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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,681	01/07/2005	Ralf Neuhaus	2002P03767WOUS	5198

7590 05/07/2010

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ART UNIT	PAPER NUMBER
2449	
MAIL DATE	DELIVERY MODE
05/07/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Continuation sheet:

Applicant's argument:

"Neither Traversat nor Periasamy, taken alone or in combination, disclose or suggest these claim limitations."

"The above limitations were previously present in dependant claims 27 and 30, and were written into independent claims 8 and 16, respectively. Dependant claims 27 and 30 were rejected for the same reasons in the Office Action. Therefore, the arguments made herein apply equally to amended independent claims 8 and 16."

"In contrast, the claim limitations of independent claims 8 and 16 are clear that each of the communication components:

1. Searches for neighboring ones of the communication components;

2. Creates a servant list of the neighboring communication components; and

3. Maintains the current utilization level of each server functionality of the neighboring communication components in the servant list by performing a repeated search at timed intervals."

"Conversely, Traversat is devoid of any teaching or suggestion of searching neighboring communication components to create servant lists, and updating those servant lists with the current utilization level of each server functionality at timed intervals. A peer group in Traversat may be infinite. Traversat makes no distinction between neighboring components and other components. For example, at paragraph [0082], Traversat states that "[a] peer group may theoretically be as large as the entire collected universe."

Examiner's response:

Traversat teaches at para.[0027] Rendezvous nodes preferably cache information that may be useful to peer nodes including new peer nodes. Rendezvous nodes may provide an efficient mechanism for isolated peer nodes to discover network resources and may make peer node discovery more practical and efficient. **In one embodiment, peer nodes may become rendezvous nodes.** Peer nodes may elect themselves, through the discovery protocol, to become rendezvous nodes. Alternatively, peer nodes may be appointed rendezvous nodes by their peer groups. **Preferably, a peer group is not required to have a rendezvous node.** In one embodiment, any members of a peer group may become rendezvous nodes in a peer group.

And at para. [0090] The peer-to-peer platform may further include a peer-to-peer services layer 140. This layer may provide capabilities that may not be absolutely necessary for a peer-to-peer network to operate but that may be desirable to provided added functionality beyond the core layer 120 in the peer-to-peer environment. The service layer 140 may deal with higher-level concepts such as search and indexing, directory, storage systems, file sharing, distributed file systems, resource aggregation and renting, protocol translation, authentication and PKI (public key infrastructure) systems. These services, which may make use of the protocols and building blocks provided by the core layer 120, may be useful by themselves but also may be included as components in an overall P2P system. Thus, services may include one or more services 144 provided by the peer-to-peer platform. **These platform-provided**

services 144 may include indexing, searching and file sharing services, for example. The services layer 140 may provide hooks for supporting generic services (such as searching, sharing and added security) that are used in many P2P applications. Thus, services may also include one or more services 142 not provided as part of the peer-to-peer platform but rather provided by the peer-to-peer platform community. These services 142 may be user-defined and may be provided, for example, to member peers in a peer group as a peer group service."

Traversat teaches that communication components (peers) comprise both client and server functionalities . It is the part and parcel of being a peer as described in para. [0027] and [090].

Traversat teaches at FIG. 2 illustrating one embodiment of peer-to-peer platform software architecture at the conceptual level.

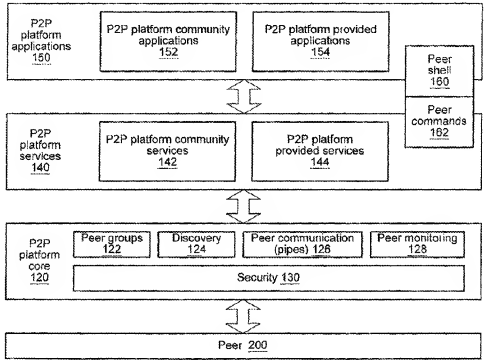

FIG. 2

Please note elements 128 "PEER MONITORING" and 122 "PEER GROUPS." Each of the peers incorporate this element having the functionality of:

Para. [0083], "**Peer monitoring 128** enables control of the behavior and activity of peers in a peer group and can be used to implement peer management functions including access control, priority setting, traffic metering, and bandwidth balancing."

Peer groups 122 may establish a set of peers and naming within a peer group with mechanisms to create policies for creation and deletion, membership,

advertising and discovery of other peer groups and peer nodes, communication, security, and content sharing.

[0114] Peers may publish and provide network resources (e.g. **CPU, storage and routing resources**) that may be used by other peers. Peers typically interact with a small number of other peers (network neighbors or buddy peers). Peers that provide the same set of services tend to be inter-changeable. Thus, it may not matter which peers a peer interacts with. Generally, assumptions should not be made about peer reliability or connectivity, as a peer may appear or leave the network at any time. Peers may have persistent storage. **A peer may optionally cache information.**

[0128] Peer groups may also create a monitoring environment. Peer groups may permit peers to monitor a set of peers for any special purpose (heartbeat, **traffic introspection**, accountability, etc.). Peer groups may also provide a controlled and self-administered environment. Peer groups may provide a self-organized structure that is self-managed and that may be locally managed.

[0477] **Peer Monitoring and Metering**

[0478] Peer monitoring may include the capability to closely **keep track of a (local or remote) peer's status**, to control the behavior of a peer, and to respond to actions on the part of a peer. These capabilities may be useful, for example, when a peer network wants to offer premium services with a number of desirable properties such as reliability, scalability, and guaranteed response time. For example, a failure in the peer system is preferably detected as soon as possible so that corrective actions

can be taken. It may be preferable to shut down an erratic peer and transfer its responsibilities to another peer.

[0479] **Peer metering** may include the capability to accurately account for a peer's activities, **in particular its usage of valuable resources.** Such a capability is essential if the network economy is to go beyond flat-rate services. Even for providers offering flat rate services, it is to their advantage to be **able to collect data and analyze usage patterns** in order to be convinced that a flat rate structure is sustainable and profitable.

[0480] In one embodiment, the peer-to-peer platform may provide **monitoring and metering** through the peer information protocol, **where a peer can query another peer for data such as up time and amount of data handled.** Security is important in peer monitoring and metering. In one embodiment, a peer may choose to authenticate any command it receives. In one embodiment, a peer may decide to not answer queries from suspect sources.

Additionally, Traversat teaches at para:

[0124] **Peer groups may be formed and self organized based upon the mutual interest of peers.** In one embodiment, no particular rules are imposed on the way peer groups are formed, but peers with the same interests may tend to join the same peer groups.

[0125] In one embodiment, a scope may be realized with the formation of a corresponding peer group. **Peer group boundaries may define the search scope when searching for a group's content.**

[0126] **Peer groups may also be formed based upon the proximity of the member peers. Proximity-based peer groups may serve to subdivide the network into abstract regions.** (*neighboring ones of the communication components).*

[0127] Peer groups may provide a secure cooperative environment. **Peer group boundaries permit member peers to access and publish protected contents.** Peer groups form virtual secure regions which boundaries limit access to the peer group resources."

Parisamy teaches at col. 9, line 27-54, "Alternatively or in addition, however, remote peers can select among local backup peers based on cost information obtained **during the capabilities exchange**; indeed, this information can be used not only for backup purposes, but **also to facilitate load balancing with respect to primary peers.** For example, remote peer 715 can be configured to connect to local primary peer 735 and also to the remote peers on backup list 740. **During the capabilities exchange, each of the local peers to which remote peer 715 connects provides cost data comprising both an "inherent" resource cost associated with the peer itself and a telecommunication cost for the connection.** The resource cost associated with a particular peer (sometimes called the "box cost") represents, essentially, the cost to the network of a connection to the peer, and depends, for example, on its configuration and capabilities (for example, the more computationally powerful the machine and the more memory with which it is equipped, the smaller will be the cost) and the current traffic level through the device (so that high-traffic peers have higher costs than low-traffic peers). The costs associated with the various local

peers bias the remote peer to the primary and backups that are optimal from the perspective of network efficiency and telecommunication cost; the remote peer is programmed to dynamically evaluate cost data, along with any other network-management information deemed relevant by the system designer, in order to select the proper local peers."

Thus as illustrated by above paragraphs of Traversat and Parisamy teaches:

1. Searches for neighboring ones of the communication components;

2. Creates a servant list of the neighboring communication components;

3. Maintains the current utilization level of each server functionality of the neighboring communication components in the servant list by performing a repeated search at timed intervals.

/Ashok B. Patel/

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